

# GridPort Tutorial

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# Intro

- Everybody's got a pretty good idea of the hotpage and gridport architecture
- This talk will tell more of where gridport currently stands, where it is heading, and provide an example of how we use it
- I'm working on 8 hours of sleep for over 48 hours, and just wrote this talk this morning...so be kind

# Outline

- Gridport installation
  - Current state
  - Location for download
  - GridPort Installation
  - Session info handling
  - API
- Hotpage installation
  - Hotpage examples

# GridPort State

- Perl libraries in the current release
- Working on Perl modules
  - All cool object oriented stuff Perl
  - Expect modules release very soon (like in the next month or so)
  - This will evolve to a perl CoG
- Requires globus client tools now
- Hopefully eventually 100% perl implementation
- Starting to work with java for some parts as well...

# GridPort Download

- Version 0.9b tarball available
- <http://gridport.npaci.edu/downloads>

# GridPort Installation

- Download tarball
- Untar into install location
- Check permissions
- Read README files
- Edit/Create config files
- Start using gridport
- We need an install script

# Session Handling

- Sessions handled via cookies containing random strings which are associated with a session file which contains the username + other stuff
- Cookie:  
**s=1eaeac9c4b3546d63da04562c200d5f2**
- Session file 1eaeac9c4b3546d63da04562c200d5f2:  
**9213425::mock::132.249.200.5::hotpage**  
**(unixtime::user::ip-address::portal)**

# Rough GridPort API

- Not exact API...gives you the idea
- Authentication
  - Login, Logout, Myproxy\_login, check\_authentication, get\_username...
- Globus
  - Globusrun, globus\_job\_submit, job\_cancel, get\_output
  - File\_transfer (w/GASS)
- Storage Resource Broker (SRB)
  - Get, put...? In its infancy because SRB is just starting to become GSI enabled



# HotPage Installation

- HotPage installation
  - Untar, config, etc...
- Contains the interactive tools which submit jobs, manipulate files, and stuff like that

# HotPage GridPort Example

- Example 'code' for listing dir

```
begin{ check_authentication();}  
require `/gridport/services/globus/cgi-bin/gridport_globus_exec.cgi'  
@ls = gridport_globusrun($machine,"/bin/ls",  
                        "-l",$timeout);  
  
@format = format_ls(@ls);  
make_html(@format);  
exit;
```

# Example cont.

The screenshot displays the NPA GENIE web interface, which is a Grid Enabled Interactive Environment. The interface includes a navigation menu on the left with links such as Home, News, Allocations, User Guides, Consulting, Training, and Systems. The main content area is divided into several sections:

- IBM Blue Horizon:** A section with links for Machine Info, Message of the Day, Scheduled Downtime, Current Usage, Queue Status, and Node Map.
- File Listing:** A table showing a list of files and directories. The table has columns for Display, Edit, Delete, Permissions, and Move. The files are listed with their names, sizes, and timestamps.
- Code Editor:** A text editor window showing a C program. The code includes headers, a main function, and MPI-related code for sending and receiving data.
- Job Submission Form:** A form titled "Job Submit - Notepad" that prompts the user to fill out fields for Arguments, Select Queue, Number of Cpus, and Max Time (min) before submitting the job.

At the bottom of the interface, there is a status bar with options to Show in Frame, Pop-Up, or Close. The status bar also displays various system metrics and a list of nodes with their respective status indicators.

## To Do:

- Make some useful documentation
- Better error handling
- Finish perl modules
- 100% pure perl implementation
- Make into a CoG

# Contacts and Stuff

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